

Teaching and Learning Project Assessment Report

What we wanted to learn about our students:

1. What Institutional Student Learning Outcomes and/or Program Student Learning Outcomes does this project assess?
Be aware of the chemical nature of life and apply chemical principles to everyday concepts such as diet and health.
2. What is the research question investigated by this project
We studied four sections of Human Physiology to find out how well students were understanding material on the chemistry of life.
3. Why is this research question of importance to the program? What background information is needed to understand the rationale for this project?
This question was of importance to the program because program-level assessment is a campus requirement, and that chemistry is the one of the theoretical foundations for the understanding of Human Physiology. It was also our first attempt at program-level assessment on a pilot basis in one course, as enumerated in our assessment plan that was included in the prior year's unit plan.

What we did:

4. How was the research question investigated? What students were studied? (If sampling was used, how was the sample chosen? Did the sample adequately represent all students in the program? Explain.)
We studied four sections of Human Physiology to find out how well students were understanding material on the chemistry of life.
5. Were direct, indirect, or qualitative measures used in the assessment?
 - a. Direct measures of student learning through an assessment of student work
Describe the assessment instrument, the process used for scoring student papers, and give a description of proficiency.

We looked at scores on the chemistry unit exam in Human Physiology (Bio 45).
 - b. Indirect measures of student performance such as success rates, numbers of certificates completed, etc.
Precisely define the measure. Briefly explain how the indirect measures give information about the Student Learning Outcome.

None.
 - c. Qualitative measures of student or faculty perception gathered through surveys, interviews, etc.
Attach a copy of the survey or interview questions. Briefly explain how the qualitative measures give information about the Student Learning Outcome.

None.

What we learned about our students:

6. What are the findings or results of this project? Summarize the data.
The results showed that after a unit on the chemical basis of life, a majority of students in all sections were proficient or above in this particular PSLO. Some sections performed better than others.

7. What do the results mean? What hypothesis is the most plausible explanation for the results?
The most plausible explanation for these results is that instruction is effective, and that many students are motivated. Aside from this, it is difficult to ascertain additional meaning, and impossible to extrapolate to the program in Biology as a whole.

What we plan to do next to improve student learning:

8. How will the results of this project be used to improve student learning in the program? What is the plan of action? Who is responsible for implementing the action plan and what is the timeline?

Because the Biology department is going to be dramatically altering our PSLOs and assessment cycle plans, no action will be taken on the results of this study. The value of this study was in the direct observation of the data and its applicability to the success of each instructor's individual students.

Plans for the implementation of this new PSLO assessment cycle can be found in the current Biology department unit plan.